Antimicrobial Resistance of *Salmonella* Typhi in the United States: the National Antimicrobial Monitoring System (NARMS), 1999

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Background: Infection with Salmonella Typhi causes approximately 300 laboratory-confirmeds cases of typhoid fever in the United States each year. While the infection may be severe and life-threatening, treatment with effective antimicrobial agents has reduced to less than 1% in the US. Domestic antimicrobial resistance patterns have important implications for typhoid treatment.

Methods: Review of surveillance data for typhoid fever cases reported to the National Antimicrobial Resistance Monitoring System (NARMS) for enteric bacteria at the Centers for Disease Control and Prevention (CDC) from January 1 to December 31, 1999. Antimicrobial susceptibility testing was performed by microbroth dilution using a standard panel of 17 antimicrobial agents.

Results: From January 1 to December 31, isolates from 161 patients with typhoid fever were reported to NARMS by 14 states and 2 city health departments. Among the 120 patients for whom information was available, the median age was 23 (range, 1-86 years) and 50% were female. Among the 41 patients with completed surveillance forms, 25 (61%) were hospitalized and 23 (56%) reported travel outside the US. Thirty-nine (24 %) isolates were resistant to at least one antimicrobial agent; 23 isolates (14%) were multi-drug resistant including resistance to ampicillin, chloramphenicol, and trimethoprim-sulfamethoxazole. Although no isolates were resistant to ciprofloxacin, 29 (18%) were resistant to nalidixic acid. A single isolate was resistant to ceftriaxone; this represents the first ceftriaxone resistant S. Typhi isolate reported to CDC.

Conclusions: The presence of multidrug resistant typhoid should be considered when making decisions about antimicrobial therapy for typhoid fever. Continued surveillance is important for monitoring emerging antimicrobial resistance in S. Typhi.

Suggested citation:

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